

**IN THE CLAIMS:**

- 1 1. (PREVIOUSLY PRESENTED) An intermediate network device for use in a com-  
2 puter network carrying network traffic corresponding to sessions, the intermediate net-  
3 work device comprising:
  - 4 a traffic scheduler having one or more resources for use in forwarding network  
5 traffic received at the device at different rates;
  - 6 a classification engine configured to identify the received network traffic based  
7 upon predefined criteria;
  - 8 a resource reservation engine in communicating relationship with the traffic  
9 scheduler and the classification engine;
  - 10 a receiver arranged to receive a first request from a first sourcing entity for a first  
11 session to a first receiving entity, wherein the first session is assigned a session group  
12 identifier (ID), the receiver further arranged to receive a second request from the first  
13 sourcing entity for a second session to a second receiving entity, wherein the second re-  
14 quest is assigned a second group identifier (ID); and
  - 15 wherein, in response to the requests to reserve resources, the resource reservation  
16 engine determines whether the session group ID of the first session matches the session  
17 group ID of the second session and, if so, directs the traffic scheduler to share resources  
18 that are reserved for the second session with the first session.
- 1 2. (ORIGINAL) The intermediate network device of claim 1 wherein
  - 2 the resource reservation engine includes a data structure for storing information  
3 for the sessions, and
  - 4 the resource reservation engine stores a session group identifier (ID) for each ses-  
5 sion in the data structure.

1 3. (ORIGINAL) The intermediate network device of claim 2 wherein the session group  
2 identifier associated with a given session includes a source address of an entity sourcing  
3 the traffic flow of the given session and a resource identifier (ID).

1 4. (CURRENTLY AMENDED) The intermediate network device of claim-3 1 wherein:  
2 the resource reservation engine utilizes the Resource reSerVation Protocol  
3 (RSVP) specification standard, and  
4 the session group ID of a given session is contained in a RSVP Path message as-  
5 sociated with the given session.

1 5. (PREVIOUSLY PRESENTED) The intermediate network device of claim 4 wherein  
2 the first and the second sessions carry voice information.

1 6. (PREVIOUSLY PRESENTED) The intermediate network device of claim 5 wherein  
2 the first and the second sessions originate from a single sourcing entity.

1 7. (CANCELLED)

1 8. (CURRENTLY AMENDED) The intermediate network device of claim 7 1 wherein  
2 the first and the second sessions carry voice information and correspond to a call waiting  
3 context.

1 9-18 (CANCELLED)

1 19. (PREVIOUSLY PRESENTED) A method for reserving resources by a network de-  
2 vice for transmission of messages through a computer network comprising:

3 receiving a first request from a sourcing entity for initiating a first session to a  
4 first receiving entity by the network device;  
5 identifying the first session by writing a session group identifier (session ID) into  
6 packets of the first session;  
7 receiving a second request from the sourcing entity for initiating a second session  
8 to a second receiving entity for initiating a second session using the session ID of the first  
9 session; and  
10 transmitting a setup message to enable other network devices to share resources  
11 between the first session and the second session in response to both the first and second  
12 sessions having the same session ID.

1 20. (PREVIOUSLY PRESENTED) The method of claim 19 further comprising:  
2 including a data structure for storing information for the sessions in a resource  
3 reservation engine, and  
4 storing the session ID for each session in the data structure in the resource reser-  
5 vation engine.

1 21. (PREVIOUSLY PRESENTED) The method of claim 20 further comprising:  
2 identifying a given session by a source address of an entity sourcing the traffic  
3 flow of the session and a resource identifier (ID).

1 22. (CURRENTLY AMENDED) The method of claim ~~24~~ 19 further comprising:  
2 utilizing the Resource reSerVation Protocol (RSVP) specification standard in the  
3 resource reservation engine, and  
4 inserting the session ID of a session in a RSVP Path message associated with the  
5 given session.

1 23. (PREVIOUSLY PRESENTED) The method of claim 22 further comprising:  
2 carrying voice information over the first and the second sessions.

1 24. (PREVIOUSLY PRESENTED) The method of claim 23 further comprising:  
2       originating the first and the one or more second sessions from a single sourcing  
3 entity.

1 25. (CANCELLED)

1 26. (CURRENTLY AMENDED) The method of claim ~~25~~ 23 further comprising:  
2       carrying voice information which corresponds to a call waiting context over the  
3 first and the second sessions carry voice information.

1 27. (CURRENTLY AMENDED) A network device for reserving resources in transmis-  
2 sion of messages through a computer network comprising:  
3       means for receiving a first request from a sourcing entity for initiating a first ses-  
4 sion to as a first receiving entity ~~by the network device~~;  
5       means for identifying the first session by writing a session group identifier (ses-  
6 sion ID) into packets of the first session;  
7       means for receiving a second request from the sourcing entity for initiating a sec-  
8 ond session to a second receiving entity using the session ID of the first session; and  
9       means for transmitting a setup message to enable other network devices to share  
10 resources between the first session and the second session in response to both the first  
11 and second sessions having the same session ID.

1 28. (PREVIOUSLY PRESENTED) The device of claim 27 further comprising:  
2       means for including a data structure for storing information for the sessions in a  
3 resource reservation engine, and  
4       means for storing the session ID for each session in the data structure in the re-  
5 source reservation engine.

1 29. (PREVIOUSLY PRESENTED) The device of claim 28 further comprising:  
2 means for identifying a given session by a source address of an entity sourcing  
3 the traffic flow of the session and a resource identifier (ID).

1 30. (CURRENTLY AMENDED) The device of claim ~~29~~ 27 further comprising:  
2 means for utilizing the Resource reSerVation Protocol (RSVP) specification stan-  
3 dard in the resource reservation engine, and  
4 means for inserting the session ID of a session in a RSVP Path message associ-  
5 ated with the given session.

1 31. (PREVIOUSLY PRESENTED) The device of claim 30 further comprising:  
2 means for carrying voice information over the first and the second sessions.

1 32. (PREVIOUSLY PRESENTED) The device of claim 31 further comprising:  
2 means for originating the first and the second sessions from a single sourcing en-  
3 tity.

1 33. (CANCELLED)

1 34. (CURRENTLY AMENDED) The device of claim ~~33~~ 31 further comprising:  
2 means for carrying voice information which corresponds to a call waiting context  
3 over the first and the second sessions carry voice information.

1 35-50 (CANCELLED)

1 51. (PREVIOUSLY PRESENTED) A system for reserving resources in transmitting  
2 messages through a computer network comprising:

3 an intermediate network device adapted to (a) initiate a first session to a first re-  
4 ceiving entity, (b) identify the first session by writing a session group identifier (session  
5 ID) into packets of the first session, (c) initiate one or more second sessions to one or  
6 more second receiving entities using the session ID of the first session, and (d) transmit a  
7 setup message to enable other network devices to share resources between the first ses-  
8 sion and the second session in response to both the first and second sessions having the  
9 same session ID.

1 52. (PREVIOUSLY PRESENTED) The system of claim 51 wherein a data structure is  
2 included for storing information for the sessions in a resource reservation engine, and  
3 wherein the session ID for each session is stored in the data structure in the resource res-  
4 ervation engine.

1 53. (PREVIOUSLY PRESENTED) The system of claim 52 wherein a given session is  
2 identified by a source address of an entity sourcing the traffic flow of the session and a  
3 resource identifier (ID).

1 54. (CURRENTLY AMENDED) The system of claim ~~53~~ 51 wherein a Resource reS-  
2 erVation Protocol (RSVP) specification standard is utilized in the resource reservation  
3 engine, and wherein the session ID of a session is inserted in a RSVP Path message asso-  
4 ciated with the given session.

1 55. (CURRENTLY AMENDED) The system of claim ~~54~~ 51 wherein the first and the  
2 one or more second sessions carry voice information.

1 56. (CURRENTLY AMENDED) The system of claim ~~55~~ 51 wherein the first and the  
2 one or more second sessions originate from a single sourcing entity.

1 57. (CANCELLED)

1 58. (CURRENTLY AMENDED) The system of claim ~~57~~ 51 wherein the first and the  
2 one or more second sessions carry voice information and correspond to a call waiting  
3 context.

59-68 (CANCELLED)

1 69. (CURRENTLY AMENDED) ~~A computer readable media, comprising:~~  
2 ~~said computer readable media having information written thereon, said informa-~~  
3 ~~tion having instructions for execution on a processor for the practice of a method for re-~~  
4 ~~serving resources by a network device for transmission of messages through a computer~~  
5 ~~network, the method having the steps of:~~  
6 Software encoded in one or more tangible computer-readable media and when  
7 executed operable to:  
8 initiateing a first session to a first receiving entity by ~~the~~ a network device;  
9 identifying the first session by writing a session group identifier (session ID) into  
10 packets of the first session;  
11 initiateing one or more second sessions to one or more second receiving entities  
12 using the session ID of the first session; and  
13 transmiting a setup message to enable other network devices to share resources  
14 between the first session and the second session in response to both the first and second  
15 sessions having the same session ID.

1 70-74 (CANCELLED)

1 75. (PREVIOUSLY PRESENTED) A method for reserving resources to transmit mes-  
2 sages through a computer network comprising:  
3 selecting a group session ID for establishing a first session;

4           establishing the first session from a network sourcing device to a first network  
5 receiving device routing through an intermediate network device;  
6           using the same group session ID for establishing a second session;  
7           establishing the second session from the network sourcing device to a second net-  
8 work receiving device routing through the intermediate network device; and  
9           sharing, in response to the first session and the second session having the same  
10 group session ID, resources reserved for the first session with the second session.

1   76. (PREVIOUSLY PRESENTED) The method of claim 75, further comprising:  
2           receiving by the intermediate network device a first message of the first session  
3 and a second message of the second session, the first message and the second message  
4 having the same group session ID; and  
5           sharing by the intermediate network device, in response to the first message and  
6 the second message having the same group session ID, resources reserved for the first  
7 session with the second session.

1   77. (PREVIOUSLY PRESENTED) A network device for reserving resources to trans-  
2 mit messages through a computer network comprising:  
3           means for selecting a group session ID for establishing a first session;  
4           means for establishing the first session from a network sourcing device to a first  
5 network receiving device routing through an intermediate network device;  
6           means for using the same group session ID for establishing a second session;  
7           means for establishing the second session from the network sourcing device to a  
8 second network receiving device routing through the intermediate network device; and  
9           means for sharing, in response to the first session and the second session having  
10 the same group session ID, resources reserved for the first session with the second ses-  
11 sion.

1   78. (PREVIOUSLY PRESENTED) The method of claim 77, further comprising:



2 means for receiving by the intermediate network device a first message of the first  
3 session and a second message of the second session; and

4 means for sharing by the intermediate network device, in response to the first  
5 message and the second message having the same group session ID, resources reserved  
6 for the first session with the second session.

1 79. (CURRENTLY AMENDED) A network device for reserving resources to transmit  
2 messages through a computer network comprising:

3 a signaling entity configured to detect a situation where a second session between  
4 a network sourcing device and a second network receiving device can share the resources  
5 reserved for a first session between the network sourcing device and a first network re-  
6 ceiving device;

7 a resource identifier (ID) generator configured to, in response to a situation where  
8 the second session can share resources reserved for the first session, select a same group  
9 session ID for the first session and the second session; and

10 a message generator configured to send a first message to establish the first ses-  
11 sion, and to send a second message to establish the second session, the message generator  
12 including the group session ID in both the first message and the second message.

1 80-83. (CANCELLED)